

Citation 2

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Title of the Invention: REPEATEDLY PEELABLE PRESSURE-SENSITIVE
ADHESIVE COMPOSITION OF WATER DISPERSION
TYPE AND REPEATEDLY PEELABLE
PRESSURE-SENSITIVE ADHESIVE SHEET AND THE
LIKE USING THE SAME

Claim 1 of Citation 2

A repeatedly peelable pressure-sensitive, water dispersion type, adhesive composition comprising a copolymer of a monomer mixture comprising as essential components 1) 50 % by weight or more of C4-12 alkyl (meth)acrylate, 2) 0.1 to 10 % by weight of a carboxylic group containing monomer, and 3) 0.1 to 10 % by weight of an epoxy group containing monomer; wherein a gel fraction after heat drying is 50 to 95 % by weight.

Claim 2

The repeatedly peelable pressure-sensitive, water dispersion type, adhesive composition according to Claim 1, wherein the number of mols of a carboxylic group is larger than the number of mols of an epoxy group in a carboxylic group containing monomer and an epoxy group containing monomer.

Claim 3

Repeatedly peelable pressure-sensitive adhesive sheets comprising 1) a substrate and 2) a pressure-sensitive adhesive layer on the substrate; wherein the pressure-sensitive adhesive layer is prepared by heating and drying the repeatedly peelable pressure-sensitive, water dispersion type, adhesive composition of Claims 1 or 2.

Summary of Citation 2

Paragraph [0011] and [0012]

The carboxylic group containing monomer in the present invention can be acrylic acid, methacrylic acid, itaconic acid, maleic anhydride, crotonic acid, fumaric acid, etc. One or two or more carboxylic group containing monomer can be used. A used amount of the carboxylic group containing monomer is 0.1 to 10 % by weight, based on a mixture of monomers, preferably, 0.5 to 7 % by weight.

The epoxy group containing monomer in the present invention can be glycidyl acrylate, glycidyl methacrylate, methyl glycidyl methacrylate, (meth)acryl ester comprising alicyclic epoxy group, etc. One or two or more epoxy group containing monomers can be used. A used amount of the epoxy group containing monomer is 0.1 to 10 % by weight, based on a mixture of monomers, preferably, 0.5 to 7 % by weight.

Example 1

50 parts of water and 0.2 parts of potassium persulfate were charged into a reactor, and nitrogen substitution was carried out while stirring for one hour. Then, an emulsion comprising 150 parts of water; a monomer mixture consisting of 94 parts of butyl acrylate, 4 parts of acrylic acid, 2 parts of glycidyl methacrylate; 2 parts of sodium lauryl sulfate; 1 part of polyoxyethylene lauryl ether was dropped to the reactor over 3 hours at 70 degrees C. The reactant was kept for additional 2 hours at 70 degrees C. A reaction product was cooled to a room temperature and neutralized with aqueous ammonium (10 %) to obtain a repeatedly peelable pressure-sensitive, water dispersion type, adhesive composition.

Example 2

An adhesive composition was prepared by the same process as Example 1, provided that a monomer mixture was 81 parts of 2-ethylhexyl acrylate, 10 parts of methyl methacrylate, 5 parts of methacrylic acid, and 4 parts of glycidyl methacrylate.

Example 3

An adhesive composition was prepared by the same process as Example 1, provided that a monomer mixture was 84.5 parts of 2-ethylhexyl acrylate, 10 parts of butyl acrylate, 3 parts of methacrylic acid, and 0.5 parts of glycidyl methacrylate.